

REMARKS

Claims in the case are 1-3 and 6-14, upon entry of this amendment. Claims 1-3, 6 and 7 have been amended, Claims 4 and 5 have been cancelled, and Claims 8-14 have been added herein.

Basis for added Claims 8 and 9 is found at page 2, lines 12-14 of the specification. Basis for added Claim 10 is found at page 2, lines 19-21 of the specification. Basis for added Claims 11 and 12 is found at: page 9, lines 9-11 for layers (b) and (e); page 14, lines 14-15 for layer (c); and page 14, lines 20-22 for layer (d). Basis from added Claims 13 and 14 is found in original Claims 1 and 2, and at page 2, lines 12-21 of the specification.

Basis for the amendments to (a) of Claim 1, and (a) and (f) of Claim 2 is found at page 2, lines 12-14 of the specification.

In the Office Action of 25 February 2003, the Examiner has required an election from amongst two groups of claims: Group I (i.e., Claims 1-3, 6 and 7); and Group II (i.e., Claims 4 and 5). Applicants herein affirm the election, without traverse, of the invention of Group I (i.e., Claims 1-3, 6 and 7), which was previously and provisionally made by Applicants' patent attorney of record Aron Preis in a telephone conversation with the Examiner on 20 February 2003. All non-elected claims have been cancelled, and Applicants will take appropriate action relative thereto in due course.

The specification stands objected to, and Claims 1-3, 6 and 7 stand rejected under 35 U.S.C. §112, first paragraph, with regard to the terms "hard" and "solid." This rejection is respectfully traversed with regard to the amendments herein and the following remarks.

See G3-12
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The term "solid" is used in the specification and claims to better differentiate each of the thermosetting polyurethane layers (b) and (e) from the polyurethane foam layer (d), as would be recognized by one of ordinary skill in the art. Attention is directed to page 14, lines 17 through 22 of the specification, wherein the foam layer (d), and the solid layers (b) and (e) are described as being prepared from the same polyurethanes, in an embodiment of the present invention. In such a case the key difference being then that layer (d) is in the form of a foam, while layers (b) and (e) are in a solid (i.e., non-foamed) form, as would be recognized and understood by a

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skilled artisan.

The term "hard" has been removed from the claims. In addition, Claims 1 and 2 have been amended to include a recitation of materials from which surface layer (a) (and optional surface layer (f) in the case of Claim 2) may be prepared, such as polymethylmethacrylate (PMMA), polycarbonate, polyvinylchloride (PVC) and acrylic ester modified-styrene-acrylonitrile terpolymers (ASA). See page 2, lines 12-14, and page 13, line 14, line 30 through page 15, line 4 of the specification. Such materials are recognized by those skilled in the art to represent hard materials, as opposed to relatively soft materials, such as elastomeric polymers.

In light of the amendments herein and the preceding remarks, Applicants' specification and claims are deemed to meet the requirements of 35 U.S.C. §112, first paragraph. Reconsideration and withdrawal of this objection and rejection is respectfully requested.

Claims 1-3, 6 and 7 stand rejected under 35 U.S.C. §112, second paragraph. This rejection is respectfully traversed with regard to the amendments herein and the following remarks.

The term "hard" has been removed from the claims. As discussed previously herein, the term "solid" is used to better differentiate thermosetting polyurethane layers (b) and (e) from polyurethane foam layer (d), as would be recognized by one of ordinary skill in the art.

Claims 1 and 2 have been amended to conform to accepted practice before the Office. In accordance with the Examiner's suggestion, the term "neighboring components" has been replaced with --immediately adjacent layer or layers-- in each of Claims 1 and 2. Claims 3, 6 and 7 have also been amended to conform to accepted practice before the Office.

In light of the amendments herein and the preceding remarks, Applicants' claims are deemed to particularly point out and distinctly claim the subject matter which they regard as their invention. Reconsideration and withdrawal of the present rejection is respectfully requested.

Claims 1-3, 6 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over International Application Publication Number WO 94/14587 (Gilman), published under the Patent Cooperation Treaty. This rejection is respectfully traversed in light of the amendments herein and the following remarks.

Gilman disclose a layered structure that is prepared by spraying two part liquid resin polymers that chemically react and become solid, and which may be formed into bathtubs and automobile parts (abstract). The thermosetting resins of the layered structure are disclosed by Gilman as being preferably elastomeric, and include polyureas, polyurethanes and polyesters (page 4, lines 11-29). The layered structure of Gilman is further disclosed as optionally including a foam layer (page 5, lines 10-18).

Gilman, however, do not disclose, teach or suggest a multilayered article that includes both (i) a surface layer comprising at least one of PMMA, ABS, polycarbonate, polystyrene, polyvinylchloride and ASA, and (ii) an underlying polyurethane foam layer that is sandwiched or embedded in the following sequence of layers: a solid thermosetting polyurethane (PU) layer; a crosslinked PU elastomer layer; a PU foam layer; and a solid thermosetting PU layer. Applicants' claims have been amended herein such that the surface layer (a) and the polyurethane foam layer (d) are both necessary elements of their invention.

Further, Gilman does not disclose, teach or suggest the improved physical properties (e.g., impact resistance) that are provided by the multilayered articles of Applicants' present claims, which include both (i) a surface layer, and (ii) an underlying sandwiched polyurethane foam layer, as describe more particularly above. Attention is directed to the examples of Applicants' specification in which Comparative Examples A and B (which include a surface layer but do not include an underlying sandwiched polyurethane layer) have markedly reduced impact resistance relative to Example C which is in accordance with Applicants' invention, and includes both a surface layer, and an underlying sandwiched polyurethane foam

not in the claims

layer.

Regarding the comments on 5 of the Office Action of 25 February 2003 as to modifying the disclosure of Gilman to arrive at Applicants' present invention, Applicants respectfully submit that Examiner's assumptions do not constitute the disclosure of prior art. See In re Rijckaert, 28 U.S.P.Q.2d 1955 (CAFC 1993) wherein the Court of Appeals, Federal Circuit stated:


In rejecting claims under 35 U.S.C. §103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness ... "A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art ... If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. Id. at 1956.

Rijckaert argues that the examiner has not established a *prima facie* case of obviousness and that the examiner's assumptions do not constitute the disclosure of prior art. We agree. Id. at 1956.

In view of the preceding remarks and the amendments herein, Applicants' claims are deemed to be unobvious and patentable over Gilman. Reconsideration and withdrawal of this rejection is respectfully requested.

In light of the amendments herein and the preceding remarks, Applicants' presently pending claims are deemed to meet all the requirements of 35 U.S.C. §112, and to define an invention that is unanticipated, unobvious and hence, patentable. Reconsideration of the rejections and allowance of all of the presently pending claims is respectfully requested.

Respectfully submitted,

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VERSIONS WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS: (Marked-Up)

The following are versions of the amended claims with markings to show changes made thereto in the present Amendment.

1. (Once Amended, Marked-Up) An article comprising a plurality of layers arranged in the following sequence: [of components a) through f) wherein]

- a) [is] a[n optional decorative hard] surface layer comprising a member selected from the group consisting of polymethylmethacrylate, acrylonitrile-butadiene-styrene graft copolymers, polycarbonate, polystyrene, polyvinylchloride, acrylic ester-modified-styrene-acrylonitrile terpolymers and combinations thereof;[, and]
- b) [is] a solid thermosetting polyurethane layer;_i[, and]
- c) [is] a crosslinked polyurethane elastomer layer;_i[, and]
- d) [is] a[n optional] polyurethane foam layer;_i[, and]
- e) [is] a solid thermosetting polyurethane layer;_i[,] and
- f) [is] an optional substrate,

wherein each of [said] layers a) through f) [being] is bonded to its [neighboring components] immediately adjacent layer or layers.

2. (Once Amended, Marked-Up) An article comprising a plurality of layers arranged in the following sequence: [of a) through f) wherein]

- a) [is] a[n optional decorative hard] surface layer comprising a member selected from the group consisting of polymethylmethacrylate, acrylonitrile-butadiene-styrene graft copolymers, polycarbonate, polystyrene, polyvinylchloride, acrylic ester modified-styrene-acrylonitrile terpolymers and combinations thereof;[, and]
- b) [is] a solid thermosetting polyurethane layer;_i[, and]
- c) [is] a crosslinked polyurethane elastomer layer;_i[, and]
- d) [is] a[n optional] polyurethane foam layer;_i[, and]
- e) [is] a solid thermosetting polyurethane layer;_i[,] and

f) [is] an optional [decorative hard] surface layer comprising a member selected from the group consisting of polymethylmethacrylate, acrylonitrile-butadiene-styrene graft copolymers, polycarbonate, polystyrene, polyvinylchloride, acrylic ester modified-styrene-acrylonitrile terpolymers and combinations thereof,
wherein each of [said] layers a) through f) [being] is bonded to its [neighboring components] immediately adjacent layer or layers.

3. (Once Amended, Marked-Up) The article of Claim 1 wherein the polyurethanes of layers (b) and (e), and the polyurethane of layer (c) are each a product[s] of a reaction[s having] comprising identical isocyanate reactants.

4. (Cancelled)

5. (Cancelled)

6. (Once Amended, Marked-Up) The article of [claim] Claim 1 wherein said article is selected from the group consisting of a sanitary fitting and a body of a refrigerated vehicle.

7. (Once Amended, Marked-Up) The article of [claim] Claim 2 wherein said article is selected from the group consisting of a sanitary fitting and a body of a refrigerated vehicle.

8. (Added) The article of Claim 1 wherein said surface layer (a) comprises polymethylmethacrylate.

9. (Added) The article of Claim 2 wherein said surface layer (a) and said optional surface layer (f) each comprises polymethylmethacrylate.

10. (Added) The article of Claim 1 wherein said substrate (f) comprises a member selected from the group consisting of glass fiber reinforced polyester, stone, wood, metal and combinations thereof.

11. (Added) The article of Claim 1 wherein: thermosetting polyurethane layers (b) and (e) each independently have a thickness of from 0.8 mm to 8 mm; crosslinked polyurethane elastomer layer (c) has a thickness of from 0.5 mm to 4 mm; and polyurethane foam layer (d) has a thickness of from 0.5 mm to 30 mm.

12. (Added) The article of Claim 2 wherein: thermosetting polyurethane layers (b) and (e) each independently have a thickness of from 0.8 mm to 8 mm; crosslinked polyurethane elastomer layer (c) has a thickness of from 0.5 mm to 4 mm; and polyurethane foam layer (d) has a thickness of from 0.5 mm to 30 mm.

13. (Added) The article of Claim 1 wherein said surface layer (a) is a decorative surface layer.

14. (Added) The article of Claim 2 wherein said surface layer (a) and optional surface layer (f) are each independently decorative surface layers.